

TECHNICAL REVIEW DOCUMENT
for
RENEWAL of OPERATING PERMIT 99OPAD220

Allied Waste Systems of Colorado, LLC
Tower Road Landfill
Adams County
Source ID 0010182

Prepared by Lisa Clarke
March 2008

I. Purpose:

This document will establish the basis for decisions made regarding the applicable requirements, emission factors, monitoring plan and compliance status of emission units covered by the renewed operating permit proposed for this site. The Operating Permit was renewed on September 1, 2005 and expires on September 1, 2010. This document is designed for reference during the review of the proposed permit by the EPA, the public, and other interested parties. The conclusions made in this report are based on information provided in the minor modification application submitted December 7, 2007. Please note that copies of the Technical Review Document for the original permit and any Technical Review Documents associated with subsequent modifications of the original Operating Permit may be found in the Division files as well as on the Division website at <http://www.cdphe.state.co.us/ap/Titlev.html>.

Any revisions made to the underlying construction permits associated with this facility made in conjunction with the processing of this operating permit application have been reviewed in accordance with the requirements of Regulation No. 3, Part B, Construction Permits, and have been found to meet all applicable substantive and procedural requirements. This operating permit incorporates and shall be considered to be a combined construction/operating permit for any such revision, and the permittee shall be allowed to operate under the revised conditions upon issuance of this operating permit without applying for a revision to this permit or for an additional or revised Construction Permit.

II. Description of Source

The Tower Road Landfill is classified as a municipal solid waste landfill, which falls under the Standard Industrial Classification 4953. This facility is located at 8480 Tower Road, Commerce City, Adams County, Colorado. This facility is located in the Denver Metro Area. The Denver Metro Area is classified as attainment/maintenance for particulate matter less than 10 microns in diameter (PM₁₀), 1-hr ozone/VOC, and carbon monoxide (CO). Under that classification,

all SIP-approved requirements for PM₁₀, VOC, and CO will continue to apply in order to prevent backsliding under the provisions of Section 110(l) of the Federal Clean Air Act. The area in which the plant operates is classified as attainment for all pollutants except ozone. It is classified as non-attainment for ozone and is part of the 8-hr Ozone Control Area as defined in Regulation No. 7, Section II.A.16. Wyoming is an affected state within 50 miles of the plant. There are no affected states within 50 miles of the plant. The following Federal Class I designated area is within 100 kilometers of the plant: Rocky Mountain National Park.

This facility is a municipal waste landfill. Decomposing waste encapsulated within the landfill produces a gas by-product that is primarily composed of methane and carbon dioxide. Landfill gas (LFG) is emitted primarily through two sources. LFG can be emitted as fugitive gas through cover soils or through a LFG migration control system (GMCS). The GMCS is installed to control LFG migration. Collected LFG is sent to a flare for destruction. During its operation the flare generates various combustion by-products that are emitted into the atmosphere. Particulate emissions are generated from construction and operation of the landfill, which includes vehicle traffic on paved or unpaved roads and the handling of soil cover material. Tower Road Landfill also has two liquid waste solidification basins that create VOC and particulate emissions.

Based on the information provided in the minor modification application, the emission limits for CO and HAPs for the landfill gas generation and flare are incorrect and need to be revised. In addition, condition 1.7 requiring insignificant tracking of NO_x, HCl, and CO is unnecessary.

The summary of emissions that was presented in the Technical Review Document (TRD) for the original permit issuance has been modified to reflect the most recent emission factors and emission estimates (based on historic waste acceptance rates).

Facility-wide emissions are outlined below:

Pollutant	Potential-to-Emit (tons/yr)	2007 Actual Emissions (tons/yr)
PM ₁₀	4.2	2.7
PM	4.2	2.7
CO	109.9	47.8
NO _x	9.9	4.6
SO ₂	3.7	2.3
VOC	46.7	7.2
HAPs	8 & 20	4.6

The potential-to-emit VOC and HAP emissions are calculated from EPA's Landfill Gas Emissions Model (LandGEM). This emission rate is based on the landfill's maximum design capacity, and the control equipment required in NSPS WWW.

The actual emissions found in the table above are the emissions reported in 2007 within the Division's inventory.

Compliance Assurance Monitoring (CAM) Applicability

The landfill gas collection system is equipped with a flare to control VOC and HAP emissions. The potential to emit of the landfill, without controls, does not exceed major source levels and the flare is not subject to CAM. Additionally, CAM would not apply since 40 CFR Part 60, §60.18 requires continuous compliance (presence of a flame at all times).

III. Discussion of Modifications Made

Source Requested Modifications

The source submitted a request on December 7, 2007 to reduce the CO limit from 99.0 tons per year to 80 tons per year. In addition, the source requested that the HAP individual and total limits to 5 and 10 tons per year, respectively. In discussion with Allied Waste, these limits were requested to remove condition 1.7, which required insignificant source tracking of NOx, HCl and CO. The engineer made the determination that the CO limit should be the correct limit calculated in AP-42 of 109.9 tons per year and the HAP limits be set to 8 and 20 tons per year. These limits do not require insignificant activity tracking, therefore condition 1.7 was still removed from the permit.

The source also requested on May 5, 2008 to update the responsible official.

Other Modifications

In addition to the requested modifications, the Division has included changes to make the permit more consistent with recently issued permits, include comments made by EPA on other Operating Permits, as well as correct errors or omissions identified during inspections and/or discrepancies identified during review of this renewal.

These changes are as follows:

Section I - General Activities and Summary

- Revised Condition 1.1 to have a more accurate description of the October 2007 ozone nonattainment redesignation status of the Denver metro area and surrounding counties.

Section II - Specific Permit Terms

Section II.1: Landfill Gas Generation & Flare

- The CO limit was changed from 99.0 tons per year to 109.9 tons per year to accurately reflect the most recent calculation using LandGEM and AP-42 methods (based on the maximum methane generation rate which will occur in 2047). The CO emission factor was also changed from 0.4 lbs/MMBtu to 750 lbs/MMdscf methane accordingly.
- The requirement to track insignificant sources of NOx, HCl, and CO was removed since this tracking is not required at this time to show compliance with these emission limits.
- The RACT CO emission factor (in what is now condition 1.7) was revised to reflect the updated emission factor of 750 lbs/MMdscf methane.

Appendices

- Updated Appendix F to reflect March 2008 changes.